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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 25 OCT 1989

SUBJECT: ACTION MEMORANDUM - Removal request for the Southeast Rockford Groundwater Contamination Site (Site Spill ID #DK)

FROM: Kenneth Theisen, On-Scene Coordinator
Emergency & Enforcement Response Branch

TO: Basil G. Constantelos, Director
Waste Management Division

THRU: Mary A. Gade, Associate Division Director
Office of Superfund

JK
for M/G

PURPOSE

The purpose of this memorandum is to confirm the verbal approval of \$10,000 and obtain your approval to expend up to \$332,000 to mitigate the threats to human health and the environment stemming from the presence of contaminants in the groundwater in the Southeastern portion of Rockford, Illinois. The objective of the proposed time-critical response action is to provide safe drinking water to a maximum of 700 homes through temporary provision of bottled water, point of use carbon filters, or house filters where determined necessary.

This site is currently on the National Priorities List (NPL).

BACKGROUND

The Southeast Rockford Groundwater Contamination site is an area of unincorporated and incorporated Rockford, located on an area of roughly two square miles, made up of approximately 83 blocks bounded by Harrison Avenue on the north, Sawyer Avenue on the south, 21st Street on the east, and 8th Street on the west. The area is predominantly residential with a few small businesses. Historically, the properties included in this area have always been residential. Areas to the immediate north of Harrison Avenue have been industrialized for over 10 years. A large percentage of the homes are not part of the city of Rockford and consequently not on city services. Records and limited surveys indicate that some of those homes in the area, although inside city limits, are also not on city services. Shallow private wells supply these homes with water. An early estimate places up to 700 homes in the area.

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The site was first discovered in 1984 by the Illinois Environmental Protection Agency (IEPA) during the investigation of illegal dumping by a local electroplating company. Residential wells were sampled and volatile organic compounds (VOCs) including 1,1,1 - trichloroethane, trichloroethylene and 1,1, - dichloroethylene were detected. Additional sampling performed by the Illinois Department of Public Health (IDPH) demonstrated widespread contamination within the shallow aquifer supply water to the area described above.

On November 6, 1985, the United States Environmental Protection Agency's (U.S. EPA) Field Investigation Team conducted an inspection at the facility (as a result of an IEPA referral). The Southeast Rockford site received an Hazardous Ranking System (HRS) score of 42.24. The site was proposed for addition to the NPL in June, 1988 and was officially added to the NPL as a state lead site, in March 1989.

On August 9, 1989, as part of a 90 - day program review mandated by William Reilly, U.S. EPA Administrator, U.S. EPA's Emergency & Enforcement Response Branch (EERB) was asked to conduct a site assessment with sampling at the Southeast Rockford site to determine if any immediate threat to human health and the environment existed at the site. Two residential well samples were collected at the site by the Technical Assistance Team (TAT) and analyses showed the presence of 1,2 - dichloroethylene, 1,1 - dichloroethane, trichloroethylene and 1,1,1 - trichloroethane. The levels of the compound 1,2- dichloroethylene exceeded U.S. EPA Removal Action Level (RAL) of 175 parts per billion (ppb) in both cases. Both households sampled were immediately provided with bottled water for drinking and cooking.

THREAT

The conditions at the Southeast Rockford Groundwater Contamination site meet the criteria for a removal action as stated in the National Contingency Plan (NCP) 40 CFR Section 300.65, as follows:

1. Actual or potential exposure to hazardous substances by nearby populations, animals, or food chains.

The presence of up to 700 active residential wells above a plume of contaminated groundwater makes the threat of exposure imminent and substantial. The levels of the VOC 1,2 - dichloroethene found in the residential wells sampled are in excess of the Response Action Level (RAL's) of 175 parts per billion (ppb) for both this cis - and the trans - isomers.

The RAL's establish the criteria for determination of an immediate removal. In addition to the levels of contaminants such as 1,2 - dichloroethene, 1,1 -dichloroethane, and 1,1,1 - trichloroethane found in the groundwater, a comparison of the levels found by the IDPH in 1984 and 1985 in residential wells and those found by the U.S. EPA in August 1989 show that contaminant levels may be rising in certain areas. Other criteria for an immediate removal at a groundwater site met at the Rockford Site include long term consumption of contaminated drinking water (plume identified since 1984), the possibility of multiple contaminants leading to a synergistic effect in the affected public, and the presence of sensitive members of the population in the group at risk (children, the elderly). (Interim Final Guidance on Removal Action Levels at Contaminated Drinking Water Sites, Directive #9360.1-10, October 6, 1987, OSWER, OERR, ERD). All these factors indicate an increased cancer risk for households and businesses using local groundwater in Southeast Rockford, contaminated with VOCs above the removal action levels.

ENFORCEMENT

See Enforcement Confidential Attachment II.

PROPOSED ACTIONS

The following actions are proposed to alleviate the immediate potential threats to human health and the environment posed by the hazardous wastes present in the groundwater used by residents and businessmen in the Southeast Rockford area.

1. Develop and implement a sampling plan.
2. Utilize accumulated analytical results to pinpoint groups of residents potentially using contaminated groundwater and provide bottled water at a rate of 1-gallon per person per household per day.
3. Identify homes with low levels of contaminants (but above DWELs) and provide point of use filters.
4. Identify homes with higher levels of contaminants and provide whole house filter systems.

The detailed Emergency Response Cleanup Services (ERCS) cleanup contractor cost breakdown is presented in Attachment I, with the estimated project costs presented on next page.

EXTRAMURAL COSTS

| | |
|------------------------------|---------------|
| Cleanup Contractor | \$200,000 |
| Contingency (15%) | <u>30,000</u> |
| Subtotal | \$230,000 |
| TAT/TES | <u>30,000</u> |
| Extramural Subtotal | \$260,000 |
| Extramural Contingency (15%) | <u>39,000</u> |
| Extramural Total | \$299,000 |

INTRAMURAL COST

| | |
|---|------------------|
| U.S. EPA Direct Costs [\$30 hr. x (400 Regional hrs.+40 HQ hrs.)] | \$ 13,000 |
| U.S. EPA Indirect Costs (\$51 hr x 400 Regional hrs.) | <u>20,000</u> |
| Intramural Total | <u>\$ 33,000</u> |
| TOTAL REMOVAL PROJECT CEILING ESTIMATE | \$332,000 |

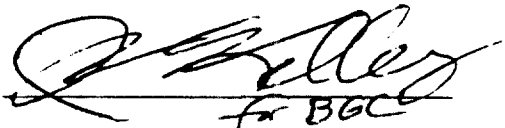
This proposed action constitutes a stabilization of the imminent and substantial hazards on site and is consistent with the long term remedial action. It is anticipated at this time that the removal will be completed within 12 months.

In spring 1990, the EERB, after identification of residential areas of concern (real and potential) will provide city water service to residents with contaminated private well water. Additional funding will be requested for installation of water mains and hookups, once the extent of the work is known. All work will be consistent with the long term remedial solution.

RECOMMENDATION

Because the conditions at the Southeast Rockford Groundwater Contamination site in Rockford, Illinois, meet the National Contingency Plan, 40 CFR Section 300.65 criteria for a removal action, your approval to conduct a removal action is recommended. With your approval, the project ceiling will be \$332,000 of which up to \$269,000 (\$200,000 plus \$30,000 plus \$39,000) may be used for cleanup contractor costs. Please indicate your decision by signing below.

APPROVAL:


for BGC

DATE:

10/25/89

DISAPPROVAL: _____

DATE: _____

bcc: D. Ouder Kirk, OS-210
M. Elam/E. Doyle, 5CS-TUB-3
A. Bauman, 5HS-10
R. Powers/R. Buckley, 5HS-GI
R. Bowden, 5HS-11
P. Schafer, 5HS-11
R. Mancos, 5HS-11
L. Fabinski, ATSDR, 5HS-10
O. Warnsley, RP/CRU, 5HS-12
T. Lesser, 5PA-14
K. Theisen, 5HS-11
(Contracting Officer)
EERB Read File
EERB Delivery Order File
EERB Site File

ATTACHMENT I

ERCS Contractor Cost Estimate Breakdown

| <u>CATEGORY</u> | <u>AMOUNT</u> |
|-----------------|---------------|
| Personnel | \$ 25,000 |
| Equipment | 25,000 |
| Materials | 100,000 |
| Subcontractors | <u>50,000</u> |
| Subtotal | \$200,000 |
| Contingency | <u>30,000</u> |
| TOTAL | \$230,000 |

ATTACHMENT II

Enforcement Sensitive Information

Redacted-Information not relevant to selection of removal action.

ATTACHMENT II

Redacted-Information not relevant to selection of removal action.

ATTACHMENT III

CONSTRUCTION ESTIMATE

| | | | VALVE | VAULT | | |
|---|------|--------|-------------|------------|---------|-------------|
| | | | EXC/BF | | TOTAL | TOTAL |
| A. WATER MAIN | UNIT | AMOUNT | + PIPE | BEDDING | \$/UNIT | COST |
| PIPE (DUCTILE IRON) pg. 63 | | | | | | |
| 6" | LF | 2,094 | 12.5 + 11.5 | 2.01 | \$ 26 | \$ 54,465 |
| 8" | LF | 13,315 | 12.5 + 11.5 | 2.01 | 31 | 412,898 |
| 12" | LF | 770 | 12.5 + 11.5 | 2.33 | 40 | 30,669 |
| VALVES pg. 63 | | | | | | |
| 6" GATE VALVE W/VAULT | EA | 1 | \$ 508 | \$1,000.00 | 1,508 | 1,508 |
| 8" GATE VALVE W/VAULT | EA | 19 | 815 | 1,000.00 | 1,815 | 34,485 |
| 12" GATE VALVE W/VAULT | EA | 2 | 1,444 | 1,000.00 | 2,444 | 4,888 |
| SPECIALTY ITEMS | | | | | | |
| KI FIRE HYD. (6"/20' OFF) | EA | 23 | | | 2,500 | 57,500 |
| 8" WET TAP | EA | 1 | | | 500 | 500 |
| 8"-6" WET TAP | EA | 1 | | | 500 | 500 |
| KI 8" MAIN PROT (PVC) pg. 66 | LF | 40 | | | 27 | 1,080 |
| 12" MAIN PROT (PVC) | LF | 20 | | | 30 | 600 |
| 1/2 20' SERVICE BRANCHES | EA | 102 | | | 650 | 66,300 |
| 1/2 40' SERVICE BRANCHES | EA | 91 | | | 795 | 72,345 |
| THRUST BLOCKS (8*14*16) | EA | 15 | | | 30 | 450 |
| REMOVAL OF EXISTING V&V | EA | 5 | | | 800 | 4,000 |
| DITCH CROSSING | EA | 1 | | | 10,000 | 10,000 |
| LAY DOWN YARD | WK | 24 | | | 300 | 7,200 |
| PAVEMENT (Bitimous) KI | LF | 16,179 | | | 19 | 307,401 |
| SURVEYING | HR | 160 | | | 55 | 8,800 |
| PERFORMANCE BOND | | | | | | 54,000 |
| WATER MAIN TOTAL | | | | | | \$1,129,500 |
| B. SERVICE CONNECTIONS | | | | | | \$ 160,000 |
| C. WELL ABANDONMENT | | | | | | 50,000 |
| D. CONSTRUCTION OFFICE, UTILITIES, SUPPLIES ETC | | | | | | 25,000 |
| E. MISCELLANEOUS | | | | | | 100,000 |

ATTACHMENT III

(CONTINUE)

CONSTRUCTION ESTIMATE

| | |
|--|-------------|
| F. CONTRACTOR IDC CHARGE ON ABOVE (3%) | \$ 15,000 |
| G. ERCS ADMINISTRATION | 34,000 |
| H. ON SITE ENGINEERING SUPPORT | 113,000 |
| <hr/> | <hr/> |
| TOTAL PROJECT | \$1,626,500 |

ATTACHMENT IV

INDEX TO THE ADMINISTRATIVE RECORD

A) Interim Final Guidance on Removal Action Levels at Contaminated Drinking Water Sites, Directive 9360.1 -10, October 6, 1987, OSWER, OERR, ERD)

B) Analytical Data collected on:

August 9, 1989
October 3,4,5, 1989
October 26, 1989
October 27, 1989
December 12, 1989

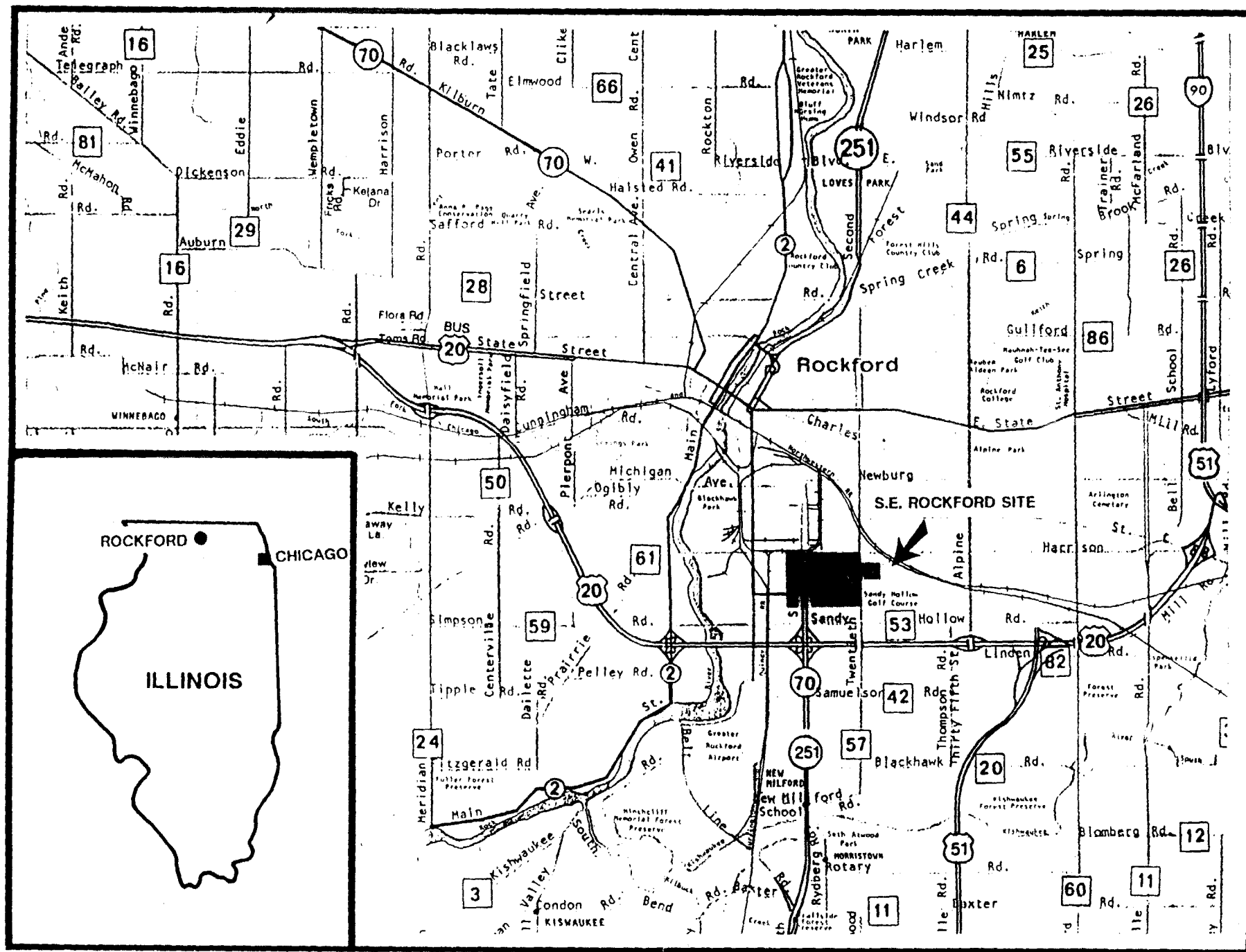


Figure I

